

Deon Goheen

From: Gordon Poppitt [poppitt@infowest.com]
Sent: Wednesday, May 12, 2010 4:05 PM
To: Deon Goheen
Cc: Dean Cox; Dave Patterson; Kurt Gardner
Subject: Re: Utility poles -----Use as Radio Towers-----and for sharing with the Planning and County Commissioners

Deon,

Just some added information received today from Rocky Mountain Power staff.
 Please forward to Rachelle, Commissioner Stucki , and Commissioner Eardley.

The info on those poles which Sturgeon pulled from the prior lines,(which are now steel towers installed in that Red Butte to St George route) is that they were originally installed back in circa 1974 . A "normal" life span is considered to be 25 to maybe as much as 40 years,dependent upon the ground level indications of rotting and deterioration.

The method of removal was , indeed , by sawing/cutting off at ground level , which means that the base is untreated and ,consequently, subject to a much faster rate of rotting.....!!

The poles that have been inserted in the properties of the two Ham applicants would then accordingly be Western Red Cedar and were ,when used by RMP , classified as " H -1" (Transmission line standard) which is a higher equivalency rating than the 'Class 1' rating used for 'normal' utility poles.

According to the RMP person (a 34 year Employee locally even before the Utah Power acquisition) these poles have been known to last longer than 40 years -- But rarely ---and only under their original treatment method, and with the Butt (base diameter) fully sealed.....!!

For the pole's insertionburial into the ground , RMP uses a formula of ' 10%-plus- 2 feet' as their standard for support below ground.

If Mr Bissell is correct in that his pole is 87 feet above ground , that would mean that that pole was originally 100 feet in length , which would mean that it was NOT one of those cut down locally from the prior RMP transmission line , but would have had to have been brought in by Sturgeaon Electric from somewhere else..(The tallest used on that old ,replaced transmission line was 90 feet). This would mean that 11 (eleven) feet of such a pole would be buried , leaving 79 feet as the residual for the 'salvaged' pole.

On the subject of height "limitations" , it would seem most appropriate to use Dean's knowledge and expertise in helping guide both Commissions in establishing some form of maximum height in accordance with "reasonable accommodation" , while still providing flexibility in being able to meet the needs for the operator's preferred band ranges and Tx efficiency.

On the internet , there are many Counties / cities/towns which have raised their guidelines to more readily accommodate the Amateur Radio operators , and many use 75 feet height as the desired height requirement.

I hope that this info gathered will help the Commissioners in creating some regulations which meet the needs of the 'Ham' , while retaining the safety ,atmosphere and appearance of the communities in which they are added.

Thanks and Regards,
 Gordon Poppitt
 Central

05/18/2010

May 15, 2010

To Whom It May Concern:

This letter is in regard to the ham radio tower that was recently erected by my neighbor, Bruce Bissell. His property abuts mine. We have been neighbors for the past 6 years. Other than the obvious aesthetic concerns there are other reasons that the County Commissioners or Planning Commission should look deeper and more carefully at this issue.

If the pole were to fall over in my direction it could possibly hit the electrical lines that are there. This would cause serious risk of injury to others or myself in the neighborhood (children behind my house and next to Bruce's home). There would be a risk of electrocution as well as a serious fire risk.

Since there has not been an official permit to install this pole, we do not have any measure of reassurance that it would not in fact fall. The danger of the pole falling over due to high winds or earthquake is very real.

One of the issues that needs to be addressed regarding this pole is the need for the pole. I support ham radio operators and understand that they are a vital resource especially in the event of an emergency. However, one of the questions to be considered is how many ham radio operators are necessary in a given area. There are two others in this area whose antenna poles are not as intrusive. Bruce had an adequate pole at his home prior to this that was not objectionable and allowed him to be in contact with people all over the United States as well as foreign countries. How does having a bigger, larger, more potentially dangerous pole enhance our safety?

Also of concern is the height of the pole. A few years ago we had a fire in this area that necessitated low flying aircraft to bring in anti-fire materials. I believe that this pole would possibly cause danger to those aircraft should they be required to follow that same flight path as in the past. There is nothing on top of the pole that alerts aircraft. Granted, aircraft as a general rule would not fly that low but this is an issue for review.

The County Commissioners and others who must make rules and enforce them for all citizens have a difficult task and not all will be satisfied with decisions that are made. It is my opinion that that the County Commissioners have a duty and responsibility to carefully review all the risk factors associated with allowing this pole to remain.

Thank you,



Paula deAnda

132 Launa Lane

Central, Utah 84722

Re: Pole info.

From: Bryan Vorwaller <bvorwaller@myrgroup.com>
View Contact

To: Bruce Bissell <reconbruce@yahoo.com>

Bruce,

This looks better than a letter from me! the pole depth is correct.

Bryan Vorwaller
District Manager
STURGEON ELECTRIC CO. INC.
Salt Lake City, Utah 84127

GUYING GUIDES

Case Description: BRUCE ANTENNA
 Pole Top Assembly: FAN TYPE DIPOLE ANT Structure Number: 2
 Pole Type: DOUGLAS FIR Modulus Elasticity: 1,920,000 psi
 Min. Class Tried: 1 Used: 1 Degraded to: 1,920,000 psi
 Pole Height: 80 ft. Embedment Depth: 10.0 ft.
 Guy Arrangement: Head-Back Guying Column Factor: 0.0
 Horizontal Span: 0 ft. Vertical Span: 0 ft.
 Line Angle Degrees: 0 Minutes: 0
 Loading Zone: Heavy Ice: 0.50 in. Wind: 4.0 lbs/sq. ft.
 Grade: B OCF: Pole: 3.00 Wind: 2.50 Tension: 1.65

Cond Num	Conductor / Code Word	Diameter (in. w/o Ice)	Weight (lb/ft w/o Ice)	Tension (lbs)	Guy Num
1	7 NO. 8 ALUMOWELD	0.3850	0.2618	500	1
2	7 NO. 8 ALUMOWELD	0.3850	0.2618	500	2
3	7 NO. 8 ALUMOWELD	0.3850	0.2618	500	3

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Guy Num	Height (ft.)	Guy Lead (ft.)	Guy Ratio	Wind-Wire (lbs)	Wind-Pole (lbs)	Tension (lbs)	Guy Load w/OCF (lbs)
1	69.00	60.0	1.15:1	0	44(x2)	500	1,426
2	69.00	60.0	1.15:1	0	44(x2)	500	1,426
3	69.00	60.0	1.15:1	0	44(x2)	500	1,426

Pole Buckling: Pinned-Fixed End Conditions

Pole Height (ft.)	Load on Pole			Req'd Circum. 46.0 ft. AGL (in.)	Circum. of Class 1 Pole (in.)
	Wt. Span (lbs)	Guys (lbs)	Total (lbs)		
80	0	1,877	1,877	0.00	35.75

Pole Bearing:

Pole Class	Butt Area (sq. ft.)	Pole Weight (lbs)	Vertical Load (lbs)	Total Load (lbs)	Bearing Pressure (lbs / sq. ft.)
1	1.74	4,777	1,877	6,655	3,814

Pole Wind Loading

140 cfm @ 21/2

Ultimate Resisting Moment

The strength of a pole is determined by the following two factors:

1. The fiber strength of the wood species
2. The diameter of the pole

The various species of poles used in the United States are listed with their rated fiber stress in Bulletin 1728F-700, RUS Specification for Wood Poles, Stubs and Anchor Logs.

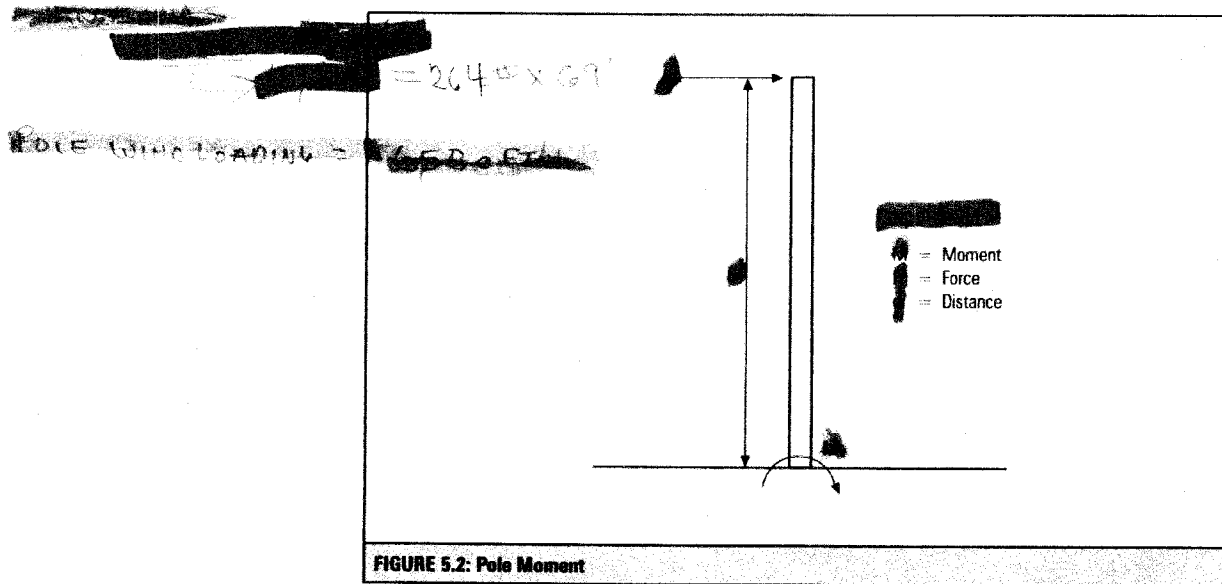
Five common species of poles used for distribution line construction are considered in this manual and listed in Table 5.7.

The strength of the pole is referred to as the ultimate resisting "moment" of the wood pole. If the fiber strength and the dimensions of the pole are known, then the ultimate resisting "moment" of the wood pole can be calculated. (A complete discussion of how to perform these calculations can be found in Chapter V-4 of RUS Bulletin 160-2 dated April 1982.)

TABLE 5.7: Fiber Stress Ratings of Poles	
Species	Fiber Stress
Southern Yellow Pine	8,000 psi
Douglas Fir	8,000 psi
Ponderosa Pine	6,000 psi
Western Red Cedar	6,000 psi
Northern White Cedar	4,000 psi

When using the term "moment" in this manual, the reference is to the product of quantity (as a force) and the distance to a particular axis or point, as shown in Figure 5.2.

The ultimate resisting moments of commonly used wood pole species and sizes have been calculated and are provided in Table 5.8.



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TABLE 1 - Southern Yellow Pine
(Fiber Stress - 8000 PSI)

Pole Length (ft)	ANSI Class	Minimum Circumference at Top (in.)	Groundline Circumference (in.) ⁽¹⁾	Capacity (ft-lbs)
30	5	19	27.7	44,900
30	6	17	25.2	33,400
30	7	15	23.7	28,100
35	4	21	31.5	66,000
35	5	19	29.0	51,500
35	6	17	27.0	41,600
40	3	23	36.0	98,500
40	4	21	33.5	79,400
40	5	19	31.0	62,900
40	6	17	28.5	48,900
45	3	23	37.3	109,600
45	4	21	34.8	89,000
45	5	19	32.3	71,200
45	6	17	29.8	55,900
50	2	25	41.6	152,000
50	3	23	38.6	121,500
50	4	21	36.1	99,400
50	5	19	33.7	80,800
55	1	27	45.9	204,200
55	2	25	42.9	166,700
55	3	23	40.0	135,200
60	1	27	47.2	222,100
60	2	25	44.3	183,600
60	3	23	41.3	148,800
65	1	27	48.5	244,900
65	2	25	45.6	200,300
65	3	23	42.6	163,300

⁽¹⁾ Groundline circumference is based on a setting depth of 10% of the pole height plus 2 feet.

Continued

By means of interpolation:

(LOADING IS APPROX 8% OF POLES CAPACITY)

Washington County Amateur Radio Emergency Services

From: KI2U <ki2u.ares@gmail.com>

Add to Contacts

To: reconbruce@yahoo.com

Bruce,

Thank you for your willingness to participate in the Washington County Amateur Radio Emergency Services (ARES). As you are aware our purpose is to provide reliable message handling in the event of a disaster that affects communications. This normally will occur when communications (radio, telephone, cell phone) systems are damaged or overloaded. Your preparation of both equipment and training will enable those in your geographic area to have emergency contact with law enforcement, fire, and medical teams through the county emergency operations center. You will also provide health and welfare traffic to those in shelters or disaster areas. Please establish contact with others in your geographic area and let your local organizations be aware of your ability and equipment. Thank you again for your preparations and we will count on you to assist in exercises and disaster events.

Hal K. Whiting, KI2U

Washington County ARES Emergency Coordinator

